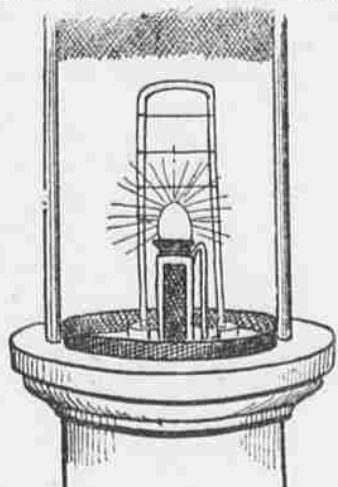


NEW LAMP FOR MINERS.

It is provided with a Gas Detecting Attachment, Placed Just Above the Flame.

One of the most practical inventions of the last century was the miner's lamp, with its sheet of gauze surrounding the flame, enabling the miner to work in coal mines where gas was liable to be found without danger of causing an explosion with his light. One objection to such a lamp is that the gas might increase in volume in the chamber so gradually that the miner would not be aware of its presence, continuing to work with the assurance that there was no danger of an explosion and not detecting anything wrong in the atmosphere. As an improvement over the lamp a Pennsylvania inventor has suspended above the flame a series of wires, which become heated and grow red in proportion to their distance from the flame, and also in ratio to the quantity of gas mixed with the atmosphere. The operation of the device is apparent. The sensitive wires are adjusted on the harp to positions determined by experiment, in which they represent percentages of gas present by becoming reddened with the heat of the flame. The user of

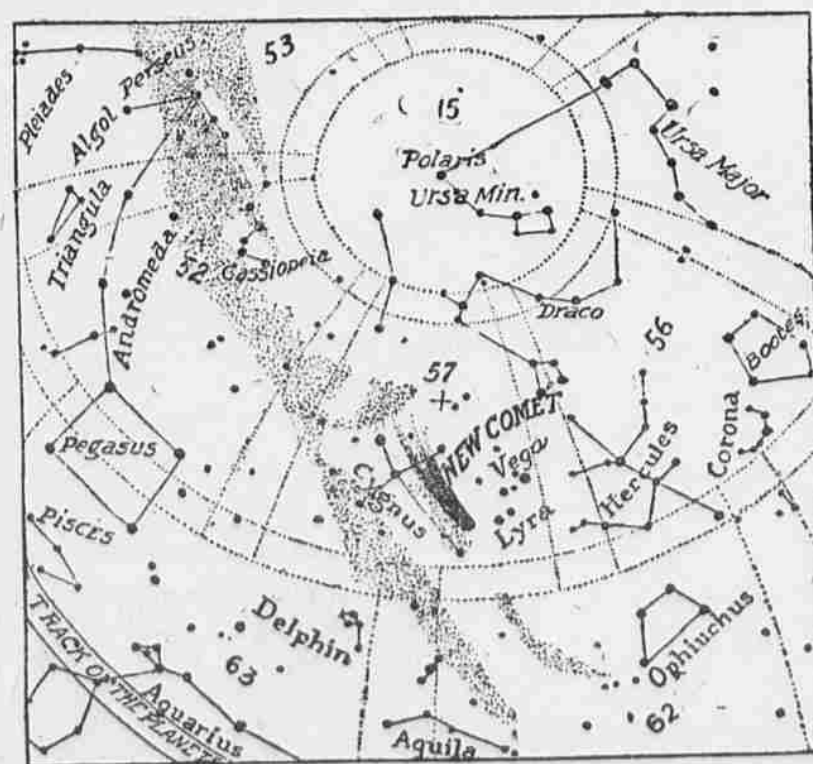


LAMP THAT DEFLECTS GAS.

The lamp will, of course, be informed of the danger limit, and when the strands are heated to an unusual or dangerous height will abstain from working in such gaseous quarters. It is stated that this gas detector may be easily attached to the lamps now in use, and it should prove a very practical arrangement for the men who are compelled to labor in the mines.—Louisville Courier-Journal.

The Violet Light Cure.
In the curious light cure of Dr. W. J. Morton, violet light is produced in the body itself. A quinine solution of the strength of one grain to eight ounces, shows a beautiful violet fluorescence under the X-rays, and as a 20-grain dose of quinine would probably cause the ten pounds of blood in the body to become a solution of similar strength, it is assumed that the blood would light up in a like way. The quinine, in a dose of five to twenty grains, is administered six hours before the X-ray treatment. The violet radiations are credited with curative properties, and Dr. Morton thinks that in cancer, which he has treated more than a year, he has obtained results that could not be reached by the X-rays alone.

POSITION OF THE NEW COMET BORELLI.



WITH the aid of the accompanying chart, a little observation of the northern heavens will enable star gazers without glasses to detect the tenuous body of Borelli's comet, glittering in the vicinity of the constellation Cygnus. This new visitor of the solar system will be found, according to the Lick Observatory astronomers, about six degrees southwest of the bright star Alpha Cygni—the brightest and most northern member of this constellation of a star of the first magnitude.

The constellation, popularly known as The Swan, lies not far to the east of Vega, also a first magnitude star, and about twice as far almost directly south of the familiar and conspicuous Pole star. The new comet was visible with the naked eye when the observations reported were made at the Lick Observatory a few weeks ago.

As it is speeding on its parabolic path with enormous velocity toward the sun, under whose fierce radiation of heat its two prominent tails are very rapidly swelling in size, the celestial wanderer ought to be easily recognized, and it may very soon become, as Prof. Campbell expects, "the brightest comet of the past ten years."

The two prominent tails, already observable in the comet, will no doubt grow, possibly into startling proportions, before the comet reaches a perihelion, which it will do in August, but when it leaves the solar system and plunges again into the cold depths of space these striking appendages will contract upon the central mass or be largely lost to the retreating comet.

NEW LIFE PRESERVER.

It is So Light and Compact That Constant Wear Occasions No Discomfort.

The steamship companies which did not provide life preservers in number equaling or exceeding its passenger-carrying capacity would be summarily dealt with by the government, and yet every one knows that when the time arrives for their use the passengers and crew may be too much excited to profit by the provision thus made for their safety. The passenger crossing the ocean would certainly feel no small degree of added security were he provided with the apparatus shown in the illustration. No one would think of wearing one of the bulky life pre-



PNEUMATIC LIFE PRESERVER.

servers usually provided on shipboard all the time, but here is an apparatus which will answer the same purpose, and yet without discomfort when constantly worn. The spiral form which the tube is given enables the wearer to suspend it around his body by means of the supporting jacket, beneath the outer clothing, and it takes but a short time to inflate the reservoir through the mouthpiece, which is provided with a valve to check the outward flow of the air. The spiral coils lie flat when deflated, and are scarcely perceptible to the wearer, who, even if the device rendered him slightly uncomfortable, would have the feeling of safety to counterbalance the annoyance.—St. Louis Globe-Democrat.

Perfumes from Flowers.
A common method of extracting perfumes from flowers is enflourage, which consists in placing the blossoms in contact with purified lard for a few days. When saturated with the perfume, the lard itself may be used, or the essential oil may be extracted under strong alcohol. The process being tedious, many attempts—mostly unsatisfactory—have been made to obtain the essential oil direct from the flowers by means of light petroleum. A curious recent discovery is that perfume-making still goes on in the flowers during enflourage, and Dr. Albert Hesse reports that a ton of tuberose blossoms only yielded 66 grams of oil by petroleum extraction, but gave up 801 grams to the embedding fat in enflourage and yielded 78 grams more when the faded blossoms were distilled. The flowers appear to have contained more perfume after exhaustion by enflourage than when first gathered.

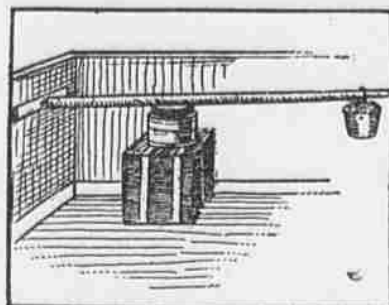
Evil Effects of Alcohol.
A municipal committee of Glasgow, Scotland, appointed to determine the effect of alcoholic drinks on the marked increase of insanity, reports that out of 505 admissions to the Glasgow district asylum and 213 admissions to the poorhouse, 33 per cent. were traceable to alcoholic drinks as a cause. In the United States 10 to 12 per cent. of insanity is from drink.

AGRICULTURAL HINTS.

FARM DAIRY CHEESE.

Department of Agriculture Is Trying to Develop Its Manufacture on Larger Scale.

There is a popular impression that the manufacture of cheese in this country has been so completely transferred to the factory system during the last half century, as practically to abolish cheese-making on dairy farms. But the agricultural returns of the twelfth United States census show that in the year 1899 there were still 15,670 farms upon which dairy cheese was made. The quantity produced on these farms during that year was 16,372,330 pounds, an average of 1,045 pounds per farm. This product constituted almost five and one-half per



FARM DAIRY CHEESE PRESS.

cent. of all the cheese made in the United States.

It is the purpose of farmers' bulletin No. 166, "Cheese Making on the Farm," to furnish for the farm household a brief description of the most approved methods used in the manufacture of several varieties of cheese. Details of management, which are briefly and plainly described, include aeration and cooling, coloring, the use of rennet, curdling, cutting, cooking, molding, pressing, dressing, salting and curing. The operation of pressing is explained as follows: The press may be a simple lever and weight, described as follows: The lever should be about 12 feet long. A broken wagon tongue answers the purpose very well. Set a strong box on which the mold may be placed, about three feet from a wall, post or tree. On the latter nail a slat and under it put one end of the lever. Put a circular board about six inches in diameter upon the mold, and on this rest the stick or lever. A pall containing a few cobbles will answer for the weight. Do not apply full pressure at first, but let the weight hang about half-way between the mold and the outer end of the stick. Let the cheese remain a few hours in the press, then take out and dress.

The ordinary process by which our American cheese is made in factories is not applicable to the farm dairy, because it takes too much time and is so complicated that it requires years of practice to become familiar with the varying conditions in which milk comes to the vat. The various changes that take place in milk, and which are troublesome in making cheese, nearly all develop in the night's milk, kept over until the following morning. So, if milk is made into cheese immediately after it is drawn, no difficulty need be experienced. By employing a simple and short method of manufacture, anyone at all accustomed to handling milk can, with the appliances found in any well-regulated farmhouse, make uniformly a good cheese.

CALVES FOR MARKET.

Follow the Directions Here Given and You Will Get a Fair Price for Your Veal.

Calves from three to six weeks old, and weighing about 100 pounds, or say from 80 to 120 pounds, are the most desirable weights for shipment. The head should be cut out, so as to leave the hide of the head on the skin. The legs should be cut off at the knee joint. The entrails should be all removed, excepting the kidneys, the liver, lights and heart should be taken out. Cut the carcass open from the neck through the entire length—from head to tail. If this is done they are not so apt to sour and spoil during hot weather. Many a fine carcass has spoiled in hot weather because of its not being cut open. Don't wash the carcass out with water, but wipe out with a dry cloth. Don't ship until the animal heat is entirely out of the body, and never tie the carcass up in a bag, as this keeps the air from circulating and makes the meat more liable to become tainted. Mark for shipment by fastening a shipping tag to the hind leg. Calves under 50 pounds should not be shipped, and are liable to be condemned by the health officers as being unfit for food. Merchants, too, are liable to be fined if found selling these "slunks" for violation of the law. Very heavy calves, such as have been fed on buttermilk, never sell well in our market—they are neither veal nor beef.—Chicago Trade Bulletin.

A FEW DAIRY POINTERS.

You cannot clean dirty milk. Clean milk never comes from a dirty can.

You cannot get milk from a starved cow. Sal soda is better than soap for cleaning dairy utensils.

Only the rich man can afford to keep poor cows; the poorer the farmer, the better his few cows should be.

Keep an account with each of your cows, and learn if they are helping to support you or not. Get returns for your care and trouble.—Epitomist.

PROGRESS IN FLORIDA.

Laws Passed by Legislature Devoting Large Sums to the Building of Roads.

In no state of the union is there greater enthusiasm among the people for building good roads than in Florida, and in no state has more good legislation favorable to road improvement been enacted during the past year. The legislature which recently adjourned enacted several general road laws. Their general purport can be gathered from the following brief statement by Senator A. S. Mann, who is state organizer for the Florida Good-Roads association:

"The general public at first glance will not be prepared to grasp the importance of the present good roads laws. The act giving the internal improvement fund to good roads alone in its entirety in lands and money bequeaths to the cause not less than ten or fifteen million of dollars. In Florida, where material is abundant and cheap with little or no expensive cuts or fills to make and sand as a foundation insuring perfect drainage or roadbed, an immense amount of work can be done on this fund alone; but couple with this the convict money, one-half of which goes into the general revenue fund of each county, and may be used on roads if the county commissioners so wish, and the levy of a three-mill tax on all values for same purpose, and all will see that the power to make good roads has been given without stint."

Another act of the highest importance sets aside for purposes of road improvement the Indian war claims, the payment of which has been authorized by congress. From this alone the state will realize over half a million dollars.

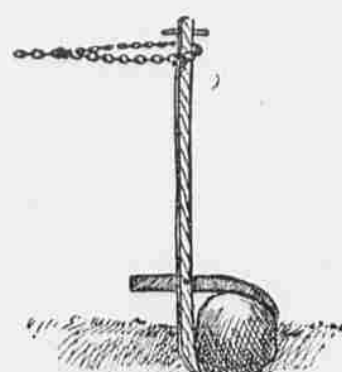
It is an interesting fact that the average swamp land fund and the Indian war claims fund both come to the state from the national government; and now that the legislature has decided to use them for road building they are virtually national aid to road improvement. The swamp lands were granted to the state by congress about the middle of the last century. A large part of the lands have since been sold or donated to promote railroads and other internal improvements, but there are still many millions of acres of valuable land from which an immense fund can be derived, all of which is to be used for road building. The roads are not to be built by the state, but by the counties, each of which will draw from these funds in proportion to the total assessed value of its property.

This is not all the road legislation the good roads advocates of Florida want. A large and enthusiastic state good roads convention was held at Gainesville in July. Resolutions were adopted demanding the employment of convicts in road building; urging joint action of counties in building through lines of roads across the state in all directions; pledging support to candidates for office who will work for good roads; declaring for cooperation with the National Good Roads association in the work of organization; and demanding that the national government aid the states in the great work of building good roads throughout the country.

STARTING LARGE STONES.

A Task That Is Quite Simple, Although It Seems to Puzzle Many Hard Workers.

Half-buried stones of medium size are hard to get out, as the soil is packed around them and no good hold can be had with the hands. For starting them out, nothing is so good as a cant-hook,



STRONG STONE HOOK.

like the one shown. It is much like those used for logs, but should have an extra strong handle with pin or ring at the top. To save wear the lower end should be faced with iron plates screwed on. The hook iron can easily be made by anyone used to working at a forge. I catch the hook at some corner or nook of the stone, and roll it out upon the stone boat without any hard lifting.—C. H. Gowdy, in Farm and Home.

Renovated Butter Business.

Although renovated butter is an improvement over its ancestors, the thought of eating the rancid putrid grease which has only been well laundered, is not a pleasant one. Removing the smell and taste from "stock" which is found in most country groceries, in a barrel in the rear, puts a premium upon bad farm butter. In one respect, it seems to be a good thing, as it affords an outlet for the rank, cheesy, mottled, greasy stuff sent to town by the careless, ignorant and uncleanly farmer. But that very farmer is the main loss. He cannot get enough for his poor product to pay him for producing it. It costs as much to feed cows and make bad butter as it does to feed cows and make good butter.—Rural World.

Clean Milking Is Important.

Pains should be taken to extract the last drop, if possible, at every milking. Not only should this be done because the milk last drawn is the richest, but that cows may be made to maintain their flow much longer when pains are taken at each milking. This is a matter of great importance to the dairyman, as it determines the profit or loss of his business. A poor man cannot afford to keep a poor cow.

Very Penetrating.

Some years ago there was an old judge on the bench in Berks county, whose decisions, in consequence of numerous reversals, did not always command universal respect. One day in a case in which he was sitting, one of the lawyers lost patience at his inability to see things in a certain light, and in the heat of the moment, remarked that the intellect of the court was so dark a flash of lightning could not penetrate it. For this contempt the judge showed a disposition to be very severe with the offender, and it was only after much persuasion by friends of the latter that he yielded and decided to accept a public apology. The following day the lawyer, accordingly, appeared before his honor and made amends by saying: "I regret very much that I said the intellect of the court was so dark lightning could not penetrate it. I guess it could; it is a very penetrating thing."—Kansas City Star.

M. K. & T. Ry. Annual Seaside Excursion.

An excursion to Galveston at this season of the year insures a delightful excursion trip at a small cost. There is nothing so good for tired bodies and weary minds as ocean breezes, and a trip of this kind at this time will prove both a health and pleasure trip. Tickets will be sold at rates less than one fare on August 30th, with final limit leaving on all regular trains up to and including September 12th, 1903. Special train will be run, composed of day coaches, chair cars and tourist sleepers. A buffet meal service will be furnished at reasonable prices. Berths in tourist sleeper are \$2.00. All being good for two persons. All applications for berth reservations should be made to Mr. E. B. Drew, General Ticket Agent M. K. & T. Ry., Parsons, Kas. Ask "Katy's" Agent for particulars.

Before Marconi.

An Egyptologist and an Assyriologist were disputing about the relative advancement of the two ancient peoples whom they were studying. "Well, sir," said the Egyptologist, "we find remains of wires in Egypt which prove the understood electricity." "Pshaw!" answered the Assyriologist. "We don't find any wires in Assyria, and that shows they knew wireless telegraphy."—Youth's Companion.

Stops the Cough.

Quinine Tablets. Price 25 cents.

Poverty is a tonic that the self-made man is generally free to recommend for some other fellow's boy.—Chicago Record-Herald.

Three trains a day Chicago to California, Oregon and Washington. Chicago, Union Pacific & North-Western Line.

If you stand too much upon your dignity, somebody is sure to walk on it.—Chicago Tribune.

Three solid through trains daily Chicago to California, Chicago, Union Pacific & North-Western Line.

The most amiable people are those who least wound the self-love of others.—Bryere.

Piso's Cure for Consumption is an infallible medicine for coughs and colds.—N. W. Samuel, Ocean Grove, N. J., Feb. 17, 1900.

The reason why so few marriages are happy is because young ladies spend their time in making nets, not in making cages.—Swift.

Putnam Fadeless Dyes color more goods, brighter colors, with less work than others.

No pleasure is comparable to the standing upon the vantage-ground of truth.—Bacon.

THE MARKETS.

New York, Aug. 26, 1903.
Flour—Dull and unchanged.
Wheat—No. 2 red 84½¢.
Corn—No. 2 58½¢.
Oats—No. 2 white 41¢.
Hay—Dull.

Cleveland, Aug. 26.—Flour—Minnesota patent \$3.90@4.40.
Wheat—No. 2 red 81½¢.
Corn—No. 3 yellow 58¢.
Oats—No. 3 white 39½¢.
Cheese—York state 11½¢@12¢.
Butter—Best creamery 20½¢.
Eggs—Strictly fresh 19¢.

Potatoes—Best grades 60¢@65¢.
Cattle—Choice steers \$5.00@5.15, calves \$7.00@7.25.
Sheep—Choice wethers \$3.75@4.00, lambs \$5.50@5.75.
Hogs—Yorkers \$6.35.

Chicago, Aug. 26.—Wheat—September 79¢.
Corn—August 50½¢.
Oats—August 34½¢.
Pork—September \$12.65.
Lard—September \$8.20.

Toledo, Aug. 26.—Wheat—Cash 82¢.
Corn—Cash 54¢.
Oats—Cash 33½¢.
Cloverseed—October \$5.52½¢.

East Buffalo, Aug. 26.—Cattle—Choice steers \$4.90@5.30, veals \$7.25@7.75.
Hogs—Yorkers \$6.20@6.30, pigs \$6.25@6.35.
Sheep—Choice wethers \$3.75@4.00, ambs \$5.80@5.90.

East Liberty, Aug. 26.—Cattle—Choice \$5.30@5.60, veals \$7.00@7.50.
Sheep—Best wethers \$3.80@4.00, ambs \$4.00@4.65.
Hogs—Prime heavy \$5.00@5.95, pigs \$6.30@6.40.

FREE PROOF FORBIDS DOUBT.
GAINES, Pa., August 3, 1903.—"I received your sample of Doan's Kidney Pills and since have taken two boxes, and I can truthfully say they are as good as they are recommended to be. When I began taking them I could not bend my back enough to pick up a stick of wood—sometimes could not walk or move my feet—had two doctors but did not get relief. I saw your ad., and got a trial box and have taken two boxes, and I am able to do a very hard day's work. Doan's Kidney Pills are a God-send to humanity."—Mrs. ELLA A. MATTHEWSON, Gaines, Pa., Box 166.

The great fame of Doan's Kidney Pills is won by the wondrous power of the free trial to demonstrate surprising merit.

Aching backs are eased. Hip, back, and joint pains overcome. Swelling of the limbs, dropsy signs, and rheumatic pains vanish. They correct uric acid with quickness, remove all the high colored, pain in passing, dribbling, frequency, bed wetting. Doan's Kidney Pills remove calculi and gravel. Relieve heart palpitation, sleeplessness, headache, nervousness, dizziness.



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P. O.
STATE.....
For free trial box, mail this coupon to Post-Office-Box 100, Buffalo, N. Y. If above space is insufficient, write address on separate slip.



Many women and doctors do not recognize the real symptoms of derangement of the female organs until too late.

"I had terrible pains along my spinal cord for two years and suffered dreadfully. I was given different medicines, wore plasters; none of these things helped me. Reading of the cures that Lydia E. Pinkham's Vegetable Compound has brought about, I somehow felt that it was what I needed and bought a bottle to take. How glad I am that I did so; two bottles brought me immense relief, and after using three bottles more I felt new life and blood surging through my veins. It seemed as though there had been a regular house cleaning through my system, that all the sickness and poison had been taken out and new life given me instead. I have advised dozens of my friends to use Lydia E. Pinkham's Vegetable Compound. Good health is indispensable to complete happiness, and Lydia E. Pinkham's Vegetable Compound has secured this to me."—Mrs. LAURA L. BREMER, Crown Point, Indiana, Secretary Ladies Relief Corps. —\$5000 forfeit if original of above letter proving genuineness cannot be produced.

Every sick woman who does not understand her ailment should write Mrs. Pinkham, Lynn, Mass. Her advice is free and always helpful.

THE FOOD THAT DOES GOOD.

A medicinal food that attacks microbes and drives out disease.



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The Only Vitalized Emulsion of Cod Liver Oil with Glycerine, Guaiacol, and the Hypophosphites of Lime and Soda.

For weak, thin, consumptive, pale-faced people, and for those who suffer from consumption, chronic diseases and weakness of lungs, chest or throat.

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will be sent by us to any address on request, so that invalids in every walk of life can test it for themselves and see what Ozomulsion will do for them. Send us your name, complete address, by Postal Card or Letter, and the free sample bottle will at once be sent to you by mail, prepaid. Also Children's Book "Babyville," in Colors. Address

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WISE WOMEN BROMO-SELTZER TAKE

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